

What is claimed is:

1. A vacuum fluorescent display comprising:

a front glass member which has light transmission properties at least partly;

a substrate opposing said front glass member
through a vacuum space;

a phosphor film formed on a surface of said front glass member which opposes said substrate and having a predetermined display pattern;

an electron-emitting portion mounted on said substrate to oppose said phosphor film and having an electron-emitting surface corresponding to the display pattern;

an electron extracting electrode arranged in the vacuum space between said electron-emitting portion and said phosphor film to be spaced apart from said electron-emitting portion by a predetermined distance; and

an insulating support member formed on said substrate and adapted to support said electron extracting electrode and divide the electron-emitting surface of said electron-emitting portion into a plurality of regions.

2. A display according to claim 1, wherein said insulating support member comprises at least one

3 partition for dividing the electron-emitting surface of
4 said electron-emitting portion into a plurality of
5 regions.

3. A display according to claim 2, wherein said
2 partition comprises partitions that are arranged
3 substantially equidistantly to be parallel to each other.

4. A display according to claim 3, wherein the
2 partitions have heights of 0.2 mm to 2.0 mm each and are
3 arranged at an interval 1/2 to 5 times the height.

5. A display according to claim 2, wherein said
2 partition divides the electron-emitting surface of said
3 electron-emitting portion into a plurality of
4 electron-emitting regions of almost the same shape.

6. A display according to claim 5, wherein the
2 electron-emitting surface of said electron-emitting
3 portion is divided into a plurality of stripe regions
4 parallel to each other.

7. A display according to claim 5, wherein
2 said insulating support member has an opening
3 corresponding to the display pattern, and
4 said partition is integrally formed with said
5 insulating support member so as to divide the opening

6 into a plurality of slit-like divisional openings.

8. A display according to claim 1, wherein said
2 electron extracting electrode is formed of a mesh-like
3 metal plate, and is supported by said insulating support
4 member to be spaced apart from the electron-emitting
5 surface by a predetermined distance.

9. A display according to claim 1, wherein said
2 electron extracting electrode is formed of a conductive
3 film formed at a top of said insulating support member.

10. A display according to claim 1, wherein said
2 electron-emitting portion is formed of a large number of
3 carbon nanotubes formed of cylindrical graphite layers.

11. A display according to claim 1, wherein said
2 electron-emitting portion comprises
3 a plate-like metal member having a large
4 number of through holes and serving as a growth nucleus
5 for nanotube fibers, and
6 a coating film formed of a large number of
7 nanotube fibers formed on a surface of the metal member
8 and on walls of the through holes.

12. A display according to claim 1, wherein said
2 electron-emitting portion and said phosphor film

- 3 comprise a plurality of sets of electron-emitting
4 portions and phosphor films provided in the vacuum space
5 in one-to-one correspondence for each display pattern.

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